

Appl. No. 10/716,587

Reply to Office Action of November 19, 2004

REMARKS

Response is hereby made to the Office Action dated November 19, 2004. By this Response, Applicant has not amended the Application, so claims 1-17 remain pending. *Although no fee or extension of time is believed to be required by this Response, the Commissioner is authorized and requested to provide any extensions of time and/or to debit any fees that may be required by this Response (including any fees for additional claims or extensions of time) from Deposit Account No. 50-2091 to avoid abandonment of this Application.*

Applicant sincerely thanks Examiner Wright for the courtesy extended during the telephonic interview with the undersigned and inventor Robert Atmur on February 9, 2005.

The Office Action requests additional information about the operability of the presently-claimed inventions. As discussed during the telephonic interview, the presently-claimed inventions are indeed operable and consistent with the laws of physics, and therefore do provide significant utility. By way of analogy, an external "tipping" force applied to a conventional spinning gyroscope produces a well-known resultant force perpendicular to the applied force that results in precession of the gyroscope. Gyroscopic orientation techniques are commonly used in spacecraft, for example, and similar principles are exploited in gyroscopic rotation sensors commonly used in aerospace and other applications. Using somewhat analogous concepts, a force (or force imbalance) applied to a spinning propeller produces a resultant force/moment that is applied to the hub, driveshaft or other part of the vehicle (*see, e.g., paragraph 0027 of the Specification*). By adjusting the phase and/or magnitude of the applied force (e.g. by varying the blade pitch of a propeller blade during rotation), the resultant

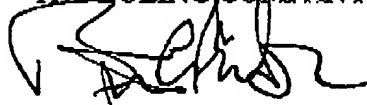
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force/moment can be controlled to adjust the orientation of the vehicle. Several examples of force imbalances used to create yaw and pitch movements of a vehicle are shown in FIGS. 5(a) and 5(b) and discussed, for example, at paragraph 0033 of the Specification.

Applicant therefore respectfully requests reconsideration and withdrawal the rejections set forth in the Office Action, and allowance of each of the remaining claims. Should the Examiner have any questions or wish to further discuss this application, Applicant requests that the Examiner contact the undersigned at (480) 385-5060 or bcarlson@ifllaw.com.

Respectfully submitted on behalf of
THE BOEING COMPANY,



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Dated

February 14, 2005

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